



[Martin, CJ](#) and [Upham, P](#) and [Klapper, R](#) (2017) Democratising platform governance in the sharing economy: An analytical framework and initial empirical insights. *Journal of Cleaner Production*, 166. pp. 1395-1406. ISSN 0959-6526

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Publisher: Elsevier Ltd

DOI: <https://doi.org/10.1016/j.jclepro.2017.08.123>

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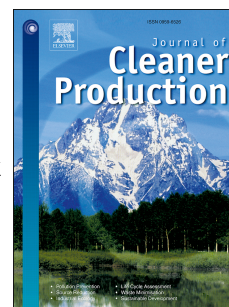
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Accepted Manuscript

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Chris J. Martin, Paul Upham, Rita Klapper



PII: S0959-6526(17)31842-5

DOI: [10.1016/j.jclepro.2017.08.123](https://doi.org/10.1016/j.jclepro.2017.08.123)

Reference: JCLP 10382

To appear in: *Journal of Cleaner Production*

Received Date: 29 March 2017

Revised Date: 3 July 2017

Accepted Date: 14 August 2017

Please cite this article as: Martin CJ, Upham P, Klapper R, Democratising platform governance in the sharing economy: An analytical framework and initial empirical insights, *Journal of Cleaner Production* (2017), doi: 10.1016/j.jclepro.2017.08.123.

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Title: Democratising platform governance in the sharing economy: an analytical framework and initial empirical insights.

Authors: Chris J. Martin^{1+*}, Paul Upham^{2,3}, Rita Klapper²

Affiliations

*Corresponding author (christopher.j.martin@durham.ac.uk)

¹ Department of Geography, Durham University, Durham, UK, DH1 3LE

² Institute for Environmental and Sustainability Communication (INFU), Leuphana University, D-21335 Lüneburg, Germany.

³ The Sustainability Research Institute, School of Earth and Environment, University of Leeds, Leeds, UK, LS2 9JT.

⁺ Formerly - School of Environment, Education and Development, The University of Manchester, Manchester, UK, M13 9PL.

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Abstract

The growing controversy around the adverse impacts of sharing economy platforms, including Airbnb and Uber, has led to calls for more democratic models of platform governance. Advocates of democratic governance models claim that these could help to create a more sustainable sharing economy by ensuring that platforms promote social and environmental values alongside the instrumental values of the capitalist economy. Exploring this claim we bring together theories of platform governance, democratic organisational governance and the enactment of values in socio-technical systems, offering a conceptual framework for analysing emerging democratic models of platform governance. Applying this framework, we present a mixed methods case study focused on Freegle, a platform that enables people to gift unwanted consumer goods locally and one of very few platforms to have sustained a democratic governance model at scale. In particular, we explore the extent to which the social, environmental and instrumental values of platform users and owners have been accommodated in the governance of Freegle. Our findings are broadly supportive of the claims made by advocates of democratic platform governance, although in Freegle's case social and environmental values are rather better accommodated than instrumental values. While we are cautiously optimistic about the potential from a sustainability perspective of democratic platform governance models, we emphasise that major challenges are likely to be faced by those implementing these; and that such models should be complemented by government regulation of the sharing economy.

Keywords: sharing economy; collaborative consumption; collaborative economy; platform co-operativism; platform governance; platform cooperative.

Word count: 9381 (plus references)

1. Introduction

Growing interest in the potential of the sharing economy to enable peer-to-peer economic activity has been catalysed by the commercial success stories of Airbnb and Uber. Advocates argue that online, peer-to-peer 'sharing' platforms enable citizens to share, lend, gift, sell and rent resources on an unprecedented scale. By enabling these practices, such platforms are thought to have the potential to promote more efficient use of underutilised resources; reduce the environmental impacts of consumption; and build social relationships between peers (Botsman and Rogers, 2010; Frenken et al., 2015). From a sustainability perspective, emerging evidence suggests that the sharing economy's: economic impacts and opportunities are considerable (Martin, 2016); yet the environmental impacts are currently unclear and are challenging to quantify (Frenken, 2017a, 2017b) and the social impacts could be adverse and disruptive (Cockayne, 2016; Richardson, 2015). In terms of the latter, concerns centre around sharing economy mega-platforms, such as Airbnb and Uber, with the power to circumvent various forms of regulation and erode labour rights internationally (Dudley et al., 2017; Malin and Chandler, 2017; McNeill, 2016).

Accordingly, sharing economy platforms have been fiercely criticised in public and media discourse for handing too much power to their corporate owners (Morozov, 2013), who are argued to focus solely or primarily on the economic bottom-line, paying scant attention to social and environmental impacts (Brinkley, 2015; Gruszka, 2017; Kallis, 2014). Often sharing this critique and employing the term platform cooperatives, activists and academics have advocated democratising the governance of sharing economy platforms as a means to create a more sustainable sharing economy (Scholz 2016; Schor 2014; Arthur 2015; McLaren & Agyeman 2015). In this context, democratisation is not only expected to help realise the potential of sharing economy platforms to create environmental benefits by reducing material consumption and challenging consumerist cultures (Cohen and Muñoz, 2016). Democratisation is also expected to contribute to realising the sustainability goal of social equity by limiting the adverse social impacts of platforms (as discussed above) and by supporting a more equitable distribution of the value created within the sharing economy. In essence, there are hopes that emergence of these new models of platform governance may contribute to a value shift within the sharing economy, whereby social and environmental values are promoted in addition to the more instrumental values of the capitalist economy.

In this paper we seek to better understand the extent to which democratic platform governance models can promote the simultaneous enactment of:

- social values including humanistic altruism, social justice, equality, mutual support, community and solidarity;
- environmental values including biospheric altruism, harmony with nature and post-materialism;
- and, instrumental values of the capitalist economy including self-interest, efficiency, financial wealth, material wealth, self-sufficiency and economic rationality.

In doing so, we focus on the example of Freegle, a UK-based platform managed and owned by approximately 1000 volunteers and which has developed and sustained a democratic model of governance for over 5 years (Martin et al., 2015). Freegle itself is an online peer-to-peer platform that enables users to gift unwanted items (typically consumer goods) to other members of their local community (rather than sending these items to the waste management system); and claims to have mobilised millions of users in the UK (Freegle, 2015). Although democratic governance models are beginning to emerge within the sharing economy (Balaram, 2016), there are few examples of such models operating and being sustained at scale. Hence, Freegle is a case of considerable interest in seeking to understand the forms of governance that could shape the future and sustainability of the sharing economy.

Although the sharing economy literature is in a nascent state of development, there is some research on the claim of sharing economy advocates (Botsman and Rogers, 2010) that platform users can, and do, enact social, environmental and instrumental values simultaneously. Initial findings, however, as well as the arguments advanced by researchers, are somewhat contradictory. Some studies support the above claims of advocates (Piscicelli et al., 2015; Tussyadiah and Pesonen, 2016); while others suggest that instrumental values may dominate and that social and environmental values are crowded out (Bardhi and Eckhardt, 2012; Barnes and Mattsson, 2016; Belk, 2014a; Hamari et al., 2016). Furthermore, Bellotti et al. (2015) provide some evidence for the argument that within the sharing economy, platform owners and users may be motivated by different values. Overall, the literature is arguably struggling to keep pace with developments in practice (Martin, 2016) and is yet to address novel forms of platform governance (democratic or otherwise) emerging within the sharing economy. Furthermore, the important issues in research and practice relating to platform governance models have only just begun to be explored (Hartl et al., 2016). Perhaps amongst the most prominent of these issues are how platform governance models can be conceptualised and how such models can accommodate the diverse and potentially conflicting sustainability values (social, environmental and instrumental) of owners and users.

Based on the literature introduced above, we start from the premises that: (a) Freegle users and owners may seek to enact different values; and that (b) both user and owner communities may be heterogeneous in terms of the values enacted. From these premises we explore the research question: how does Freegle's democratic governance model seek to accommodate the social, environmental and instrumental values of platform users and owners? In the next section of this paper we develop the analytical toolkit needed to address our research question, bringing together theories of platform governance (Tiwana et al., 2010), democratic organisational governance (Spear, 2004) and the enactment of values in socio-technical systems (Shilton et al., 2013). We then present a mixed methods case study focusing on the values of Freegle's users and owners and how these are accommodated by Freegle's democratic model of platform governance. The case background, methods and results are presented in turn. Finally, we discuss the implications of the case study, specifically regarding the role democratic platform governance could play in the sharing economy. Hence, for academic researchers from the fields of organisational science and the environmental social sciences we aim to offer a conceptual toolkit for analysing platform governance models, as well as initial empirical insights derived from the application of this framework. While for policy-makers, activists and social entrepreneurs this paper offers insights which might support their efforts to create a more sustainable and democratic sharing economy that promotes social and environmental values.

2. Theoretical context

2.1 Organisational perspectives on platform governance

Research focused on the forms of platform governance emerging within the sharing economy appears to be very limited (with the notable exception of Hartl et al. 2015); moreover conceptual or theoretical models of sharing economy platforms have yet to be developed. Hence, first we turn to the wider organisational science literature, within which the question of how digital platforms are, and may be, governed is being addressed (Evans, 2012). Platform governance has primarily been studied in the context of software development and the software platforms upon which third party applications are developed (Manner et al., 2012; Tiwana et al., 2010). Prominent examples of such software platforms include: the Mozilla Firefox Internet browser which provides a platform for add-ons developed by third-parties; and the Apple mobile operating system (iOS), which provides a platform for third-party mobile 'app' development. Tiwana et al. (2010: 8-9) offer a model for analysing the governance of these software platforms in terms of:

- decision rights partitioning – “how decision making authority is divvied [sic] between the platform owner and ... developers”; and
- control – “the formal and informal mechanisms implemented by a platform owner to encourage desirable behaviors by ... developers, and vice versa”.

Hence, platform owners and developers are thought to employ control mechanisms to influence the way other parties exercise their decision rights. The two core concepts of the model offered by Tiwana et al. (2010) can be readily transferred to sharing economy contexts; though here it is the rights of the sharing economy platform user that we would consider, rather than those of the software developer. Hence, in analysing the governance of a sharing economy platform such as Airbnb, we can draw attention to, for example: the decision rights retained by Airbnb and those passed on to the hosts and guests who use the platform (e.g. hosts have the right to decide whether or not to accept a guest, based on their profile and previous ratings); and also the dynamics of control between Airbnb and users (e.g. Airbnb offers insurance to encourage potential hosts to use the platform). However, this model of platform governance is limited, in the sense that it focuses on the dynamics of control within an organisation (Keasey et al., 1997) and overlooks the dynamics of collaboration between platform owners and users – dynamics that also shape how decision rights are exercised. Furthermore, there has been a longstanding recognition in organisational studies, of the need to address the dynamics of both control and collaboration, to develop a comprehensive understand of organisational governance (Demb and Neubauer, 1992; Sundaramurthy and Lewis, 2003). Accordingly, we turn next to the literature on democratic organisational governance, bringing to the foreground the matter of collaborative governance dynamics.

The democratic organisational governance literature focuses significantly on cooperatives as the most widespread form of democratic organisation, together with their distinctive characteristics (e.g. Novkovic 2008; Sacchetti & Tortia 2015). Conceptual models in this literature draw attention to the dynamics of control and collaboration between two groups (Cornforth, 2004; Spear, 2004): the leaders of the organisation; and, the members of the organisation (who work in and/or collectively own the organisation). In the context of cooperatives, Spear (2004) argues that limiting the power of an organisation's leaders – who might over-reach their mandated roles to become overly commercially oriented or self-serving – is the primary objective and value of democratic organisational governance. An argument that we suggest is well aligned with those of advocates of democratic platform governance in the sharing economy. Furthermore, Spear (2004) posits that leaders' power can be limited through:

- control dynamics – such as members electing leaders on a fixed-term basis and the decisions of leaders being subject to formal approval by members;
- collaborative dynamics – such as joint decision-making by members and owners based on discussions and the emergence of a consensus.

We suggest that the delineation of the member and leadership roles, as well as the associated dynamics of control and collaboration, can helpfully inform the analysis of democratic forms of sharing economy platform governance (see Figure 1). This is particularly the case, given that the platform governance literature tends to treat the role of the platform owner rather uncritically, assuming platform ownership to be synonymous with leadership and hence arguably obscuring the role of members and collaborative dynamics. Having brought together the elements of the conceptual framework needed to analyse Frengle's democratic model of platform governance, we next turn to address how social, environmental and instrumental values are enacted through, and accommodated by, this governance model. In doing so, we consider sharing economy platform governance models as forms of a socio-technical system, on the basis that the dynamics of control and collaboration between users and owners are mediated by technological constructs (e.g. the platform itself) and social constructs (e.g. formal and informal rules).

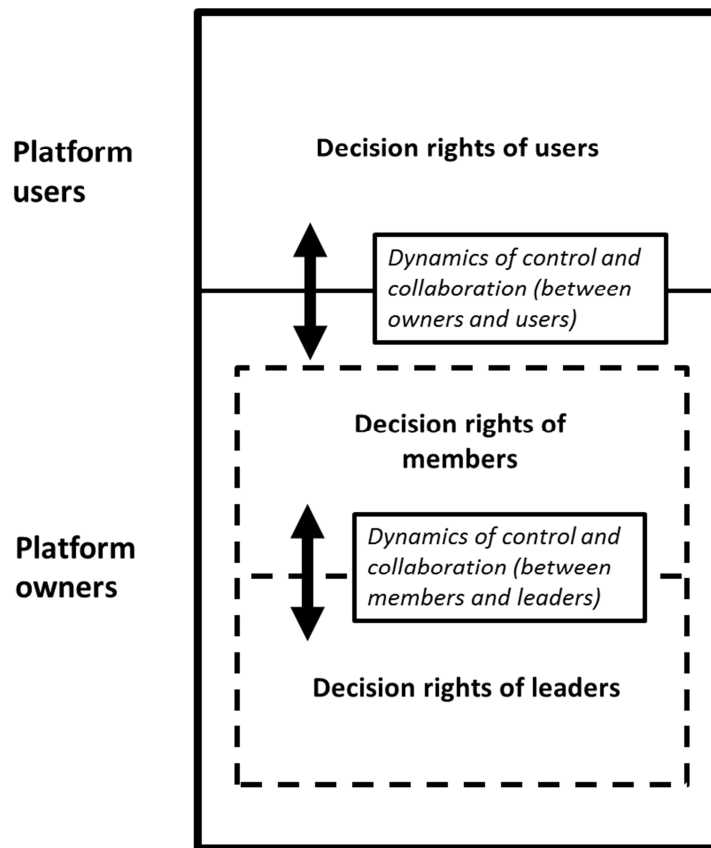


Figure 1: Conceptualising democratic models of platform governance

2.2 Analysing values in relation to socio-technical systems

In thinking about the relationships between values and their enactment and accommodation in socio-technical systems, Shilton et al. (2013: 260) raise some key questions that are relevant in this context:

“Are values concrete attributes fundamental to individuals’ personalities and identities (Schwartz, 2007)? Or, are values contextual concepts based on shared negotiations of space and place (Cohen, 2012; Nissenbaum, 2009)? How do the values of human actors become concrete features built into a technology (Johnson, 2000; Winner, 1980)? And, how are values (whether fact or negotiation) mediated by use of these technologies (Jarvenpaa and Leidner, 1998)?”

In other work on Freegle we use a social psychological approach to values (Martin and Upham, 2016), specifically that of Schwartz (2012), to examine the values that users bring to Freegle. Here, while we are again in part concerned with user values, our focus is more specifically on the ways in

which those values are expressed in platform governance and related technological design. As Shilton et al. (2013) observe, the concept of *technological affordances* (Dourish, 2001) is particularly relevant here, relating as it does to the ways in which particular behaviours, values, or norms may be encouraged, facilitated, hindered, permitted or even prevented by the technological design. This may be, for example, through giving more or less subtle salience to particular phenomena, foregrounding these for attention, or it may be through prohibitive design features, such as retention of central control by providing no facility to collaborate, or channelling communication to a defined arena. Also to be considered is what is more or less possible and/or supported not only within the technological system, but also within the social systems around it. In other words, affordances should be considered relating to both technological systems and the social contexts in which they are embedded (i.e. the platform as a socio-technical system).

Shilton et al. (2013) offer a framework for analysing the role of values in socio-technical systems; with three dimensions of the framework relating to the source of values and three dimensions that relate to the attributes of values. All are dimensions with opposing poles so that an object of analysis may be located on a continuum for each pole. Regarding value sources, *state* refers to the extent to which the system under consideration is natural or designed; *unit* refers to the extent to which it is individual or collective in nature; and *assemblage* refers to the extent to which it is homogenous or hybrid. Regarding value attributes, *salience* refers to the extent to which the values are peripheral or central to the design; *intention* refers to the extent to which they are accidental to purposive in the design; and *enactment* refers to the extent to which those values have the potential to be performed in the system (Shilton et al., 2013). In this paper we are concerned with the accommodation in platform governance models of environmental, instrumental and social values. Hence, we focus on the value attributes of Shilton et al. (2013) (salience, intention and enactment), as these provide a means to analyse the extent to which given values have been accommodated (as shown in Figure 2).

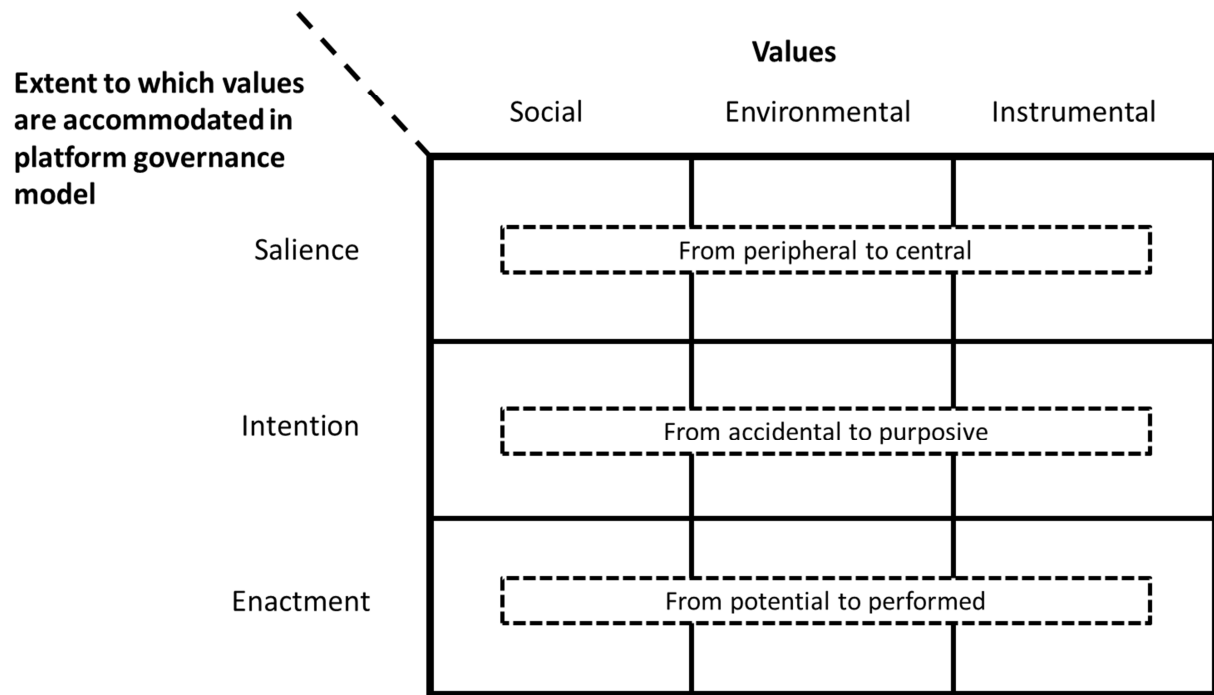


Figure 2: A framework for analysing the accommodation of values in platform governance (based on Shilton et al. (2013))

Social, environmental and instrumental values are all explicit (salient) in the design and discourse of Freegle: the organisation is specifically intended to reduce overall material consumption and meet material needs, with the proviso that material need is not the same as hedonism – there is an implied social norm of sufficiency. Following from this, detailed research questions concern: (a) the extent to which these values reflect the values of participants (i.e. Freegle leaders, members and users); and, (b) the extent to which the platform governance of Freegle accommodates these values. It is these two questions that we address here.

3. Background

In this section we outline the background to the case study in which we apply the composite analytical framework introduced above. The empirical focus of the case study is Freegle, a democratically governed digital platform which hosts online free reuse groups that enable gifting of consumer goods (e.g. electronics and furniture) within local communities. We begin by outlining how users participate in Freegle's free reuse groups and then turn to outline the history and organisation of Freegle, before discussing Freegle's place within the wider sharing economy.

At the time of writing the Freegle platform hosts 411 free reuse groups. Each group serves a specific geographical area and enables users to post: 'OFFERS' – offering an item that other users of the group might want or need; and 'WANTEDS' – requesting an item that users of the group might be willing to give. Users can reply directly, by email, to the individual making an OFFER or WANTED post and arrangements can then be made for the item to be gifted. Where a user making an OFFER receives emails from multiple people interested in receiving an item, they can choose who they wish to give the item to. Anyone interested in participating in the groups can join and all items are given freely; payment for items or delivery is prohibited. Previous studies have shown that the users of free reuse groups enact social, environmental and instrumental values (Foden, 2015) as follows:

- Social values are enacted by users seeking to participate in their local community (Nelson et al., 2007) and help people who are in need (Collom, 2011);
- Environmental values are enacted by users seeking to engage in a sustainable form of consumption (Foden, 2012; Guillard and Bucchia, 2012);
- Instrumental values are enacted by users seeking to save money (Foden, 2012) or avoid the inconveniences of other waste disposal or gift-giving practices (Guillard and Bucchia, 2012).

As noted above each Freegle reuse group serves a specific geographic area, for example a city or a rural district, in order to limit the distance members need to travel to collect items (Botsman and Rogers, 2010). Freegle is then perhaps best understood as a single digital platform hosting multiple services (i.e. free reuse groups) each of which serves a specific area and the community residing within it. Hence, the use of Freegle could yield environmental benefits not only by promoting the reuse of consumer goods that would otherwise become waste and avoiding (or at least postponing) the production of new goods to meet consumer demand, but also through the local provision of consumer goods. In the case of the latter, environmental benefits may arise as goods received via Freegle are transported relatively short distances (e.g. within a single city), compared to newly produced goods which are likely to be transported long distances through international supply chains. However, the environmental benefits of such re-use, particularly extended reuse, cannot be invariably assumed: a new product in a particular product category may have lower use phase emissions than an older product. Arguably consumers seeking to reduce environmental impacts would benefit from informed advice in this respect.

Freegle's history is intertwined with that of the Freecycle¹ platform. Freecycle was founded in May 2003 by Derron Beal as a single online group to promote reuse in Tucson, Arizona (USA) (The Freecycle Network, 2016). The idea spread rapidly: between 2004 and 2010, thousands of free reuse groups hosted by the Freecycle platform were established across the USA, Canada, UK and beyond. However, tensions and disagreements led to the fragmentation of the Freecycle network, with some volunteers leaving to establish independent free reuse groups or to develop parallel networks (Freecycle Forever, 2016). The most notable instance of fragmentation came in early Autumn 2009, when hundreds of UK volunteers left Freecycle to form Freegle (Martin et al., 2015).

Since 2009, Freegle has developed distinctive online, democratic governance processes and has resisted considerable pressure to become more commercially oriented (Martin et al., 2015). These governance processes and interactions between Freegle volunteers have taken place almost exclusively online, using semi-public online message boards. Freegle's organisational structure consists of:

- A small elected leadership – at any given time typically including 6-10 individuals who are highly committed to Freegle and its organisational objectives. Freegle's leaders work on either a wholly voluntary basis, or on the basis of being paid for conducting some activities and volunteering to conduct other activities. Key responsibilities of the leadership include developing Freegle's strategy, maintaining and developing the digital platform, raising Freegle's profile to attract users and managing engagement and collaborations with other organisations.
- A large membership – at the time of conducting the empirical research reported in this paper (2013/2014) including approximately 1000 members. These members work on a voluntary basis to run the Freegle groups, taking on responsibilities including providing support to group users, enforcing group rules and promoting use of the platform in their local area.

Concluding this background section we briefly outline why we consider Freegle to be part of the 'sharing economy', while noting that the transactions enabled by the platform take the form of gifting rather than sharing (in its common sense meaning). First, looking at the whole lifecycle of an item gifted via Freegle, one can argue that it is shared sequentially (McLaren and Agyeman, 2015); in other words ownership of the item is shared over its lifetime (from initial purchase to disposal). Secondly, the nature and scope of the sharing economy is highly contested and there has been a

¹ A more detailed account of Freegle's development can be found in Martin et al. (2015).

proliferation of overlapping and interrelated terms including collaborative consumption, the gig economy, the on-demand economy and the platform economy. Hence, it has become all but impossible to offer a definition that encompasses and reflects the use and perhaps misuse of the concept of the sharing economy in practice (Schor, 2014). However, we do emphasise that digital platforms that enable peer-to-peer economy activity at a previously unprecedented scale are a central feature of mainstream sharing economy discussion (Frenken et al., 2015; Martin, 2016). Given the fuzzy boundaries and contested nature of the sharing economy, we suggest that two forms of research are needed in this regard: (i) studies that explore and define the boundaries of the concept of sharing (e.g. Belk 2014a; Belk 2014b); and (ii) studies that explore the nature of the activity taking place within the sharing economy, as broadly defined by activists, entrepreneurs and policy-makers. This paper falls into the latter category, as Freegle (and free reuse groups more generally) is a peer-to-peer platform that has been framed as part of the sharing economy by policy-makers and advocates (Botsman and Rogers, 2010; HM Government, 2015; Schor, 2014).

4. Research methods

The research design is a mixed methods case study (Yin, 2014): it focuses on the case of Freegle and is based on quantitative and qualitative data gathered using multiple methods. An exploratory survey of the values enacted by 187 platform users was conducted; the respondents were self-selected, being those who responded to a request for participation emailed to the users of two free reuse groups. Supplementing this were 13 interviews exploring the values enacted by Freegle members and leaders, as well as the nature of Freegle's governance model (see Supplementary Material A for the interview schedule). Further qualitative data detailing how Freegle's governance model operates in practice were also collected from the Freegle (2017) wiki, which includes hundreds of pages of content created by members of Freegle throughout the history of the organisation. The collection and analysis of these three datasets are described below².

4.1. Exploring the values enacted by Freegle users

² Other results drawing on the interviews and online data are presented in Martin et al. (2015) and the results of a separate survey using Schwarz's (2012) values scale are presented in Martin & Upham (2015).

As discussed in the Introduction, our study started from the premise that more democratic platform governance models have more potential to promote the enactment of environmental, social and instrumental values – and at least fewer risks in this regard – than less democratic models. In terms of the values enacted by Freegle users, studies focused on the motivations of, and values of enacted by, users of similar free reuse platforms in UK, USA and France are supportive of this premise (Foden 2012; Nelson et al. 2007; Collom 2011; Guillard & Bucchia 2012). A survey based approach was selected to better understand if a combination of environmental, social and instrumental values are enacted by Freegle users for two reasons. First, using a survey offered a relatively low effort opportunity for users to participate in the research, compared to an interview based approach. This was a key consideration in the research design, as initial exploratory discussions with the Freegle volunteers suggested that the majority of users had fairly low levels of engagement with the platform. Hence, we adopted a survey based approach in the hope that this might enable us to recruit participants with relatively low levels of engagement. Secondly, a survey based approach offered the opportunity to conduct exploratory quantitative analysis of the relationship between user values and engagement with the Freegle platform.

The survey itself included basic demographic questions, a set of questions about users' level of engagement with the platform and 20 statements each corresponding to enactment of environmental, social or instrumental values by a user. For example, one of the statements corresponding to the enactment of instrumental values was "Using Freegle is a convenient way to get rid of things I no longer need". Participants' responses to these statements were made using a 5 point Likert scale (Strongly Disagree, Disagree, Neither Agree nor Disagree, Agree, Strongly Agree). The development of the 20 statements was informed by previous studies focused on free reuse groups with similar characteristics to Freegle (including Foden 2012; Nelson et al. 2007; Collom 2011; Guillard & Bucchia 2012). The wording and contents of the survey were also developed and refined based on two rounds of feedback from a Director of Freegle. The sampling approach was convenience-based. An invitation to participate was sent to users of two Freegle groups by a director; both groups were in the North of the UK, one serving a major city and the second a rural area. The questionnaire instrument is provided as Supplementary Material B and survey analysis methods are described alongside the results.

4.2. Exploring the values enacted by Freegle members and leaders

The sharing economy literature provides some, though quite limited, insight into the values enacted by those running sharing economy platforms in general (Bellotti et al., 2015) and in Freegle specifically. Hence as a supplement to the user survey, we adopted a qualitative approach to investigating the values of Freegle members and leaders, with data collected through 13 semi-structured narrative interviews conducted by the first author. Interview participants were asked to tell the story of their involvement in Freegle. Follow up questions were then asked about: why the interviewee volunteered with Freegle (i.e. what values they were seeking to enact); how Freegle operates as a platform and an organisation; how they hoped Freegle would develop in the future; and, other themes that emerged during the interview. Interview sampling was again convenience-based: invitations to participate were posted in Freegle online forums and selected activists were emailed directly. Through the latter, we sought to ensure the participation of both members and leaders of Freegle. Audio recordings of the interviews were made and subsequently transcribed. The transcriptions were then imported into a qualitative data analysis tool (NVIVO), themes identified and the values enacted by members and leaders inferred. To infer the values being enacted analysis focused on how members and leaders described their: motivation for being involved in Freegle; and, hopes and vision for Freegle's future development.

4.3. Exploring how values are accommodated by Freegle's governance model

The data used to explore how the values of users, members and leaders have been accommodated in Freegle's governance model was drawn from three sources. Data was primarily collected from the Freegle wiki. Analysis of this data focussed on 198 reports detailing the decisions made, successes achieved, challenges faced and controversies arising over the course of Freegle's history. "Based on a review of these data we constructed a month-by-month timeline of Freegle's activity" (Martin et al. 2015: 244). Relevant data was added to the timeline in form of brief report summaries and direct quotations. The timeline was divided into five sections relating to emerging research themes; one of these themes focused on the governance structures and processes of Freegle. The governance timeline was then reviewed to identify how the values of platform users and owners (as identified through the processes described above) had been accommodated. The interview transcripts were also coded to identify emergent themes relating to how values had shaped Freegle's governance structures and processes. Throughout this process, observations of the online interactions between members - made by the first author who acted as a Freegle member between June and December 2014 - aided interpretation of the online and interview data.

5. Results

In this section we present and discuss the research results; exploring in turn how the values of Freegle users and owners are accommodated in the governance of the platform.

5.1 User values and Freegle's governance model

The survey exploring the values of Freegle users received 187 usable responses and summary demographics are shown in Table 1. With regard to the income brackets of the survey participants: 10,000-20,000 GBP and 20,000-30,000 GBP each comprised 25% of the sample, and 30,000-50,000 GBP another 20%. For reference this spans the medians of the second to ninth decile of national UK incomes for individuals (the Guardian / HM Treasury, 2014), making these parts of the sample fairly typical of UK individuals in this respect.

In the data analysis we explored which values users enact using the platform. In particular, we focused on the relationship between the values users enact and their level of engagement with the platform. Frequency of reading Freegle emails was chosen as a proxy for *engagement*, following informal discussions and interviews with Freegle members and leaders. These emails include lists of the offers of, and requests for, items made within a given Freegle group (serving a specific geographic area as discussed above). Checking these emails enables users to monitor activity in their group by identifying when items they wish to acquire are available, or when there is demand for items they might wish to give away. In discussions with Freegle members it was noted that many users only infrequently give or receive items via the Freegle platform. But that users could (and some did) remain engaged with the platform, in between giving and receiving items, by periodically monitoring which items are being offered and requested. Hence, the frequency of reading Freegle emails was selected as a proxy for engagement as it offered greater possibilities for identifying differing levels of user engagement, compared to using frequency of making offers or requests as a proxy. Furthermore, the Freegle emails include information relevant to users seeking either to give or receive items (the two key actions enabled by the platform). While using either frequency of making offers or requests as a proxy would necessarily involve focusing on engagement in terms of only one of the two key actions enabled by the Freegle platform. Using the frequency of reading Freegle emails as proxy to an extent addresses user engagement in terms of both the two key actions. The relative frequencies with which users who might be primarily characterised as gifters of items, and those who might be primary characterised as recipients (see below), read Freegle emails

remains to be explored. Although it is probable that frequently reading Freegle emails is prominent amongst some users seeking to receive items, as being one of the first users to respond to an offer of an item might increase the likelihood of successfully acquiring it.

Summary demographics	Survey participants
Gender	69% - female 29% - male 2% - prefer not to say
Median Age	51 years
Education	75% were educated to degree level or above
Income	18% - Under 10,000 GBP 25% - 10,000-20,000 GBP 25% - 20,000-30,000 GBP 20% - 30,000-50,000 GBP 12% - Over 50,000 GBP

Table 1: Summary demographics of survey participants

Enacting	Variable	p value for Pearson's rank correlations
Instrumental values	I use Freegle to get items I cannot afford	$p < 0.000$
	Using Freegle helps me save money	$p < 0.000$
Social values	I feel part of a community of people who use Freegle	$p < 0.000$
	I like meeting people when giving and receiving items	$p = 0.002$
	Freegle is helping to create a better society	$p = 0.006$

Table 2: variables associated with user engagement with the Freegle platform

We found positive significant Pearson's rank correlations between the frequency of email reads and agreement with the five variables shown in Table 2. A further statement - "I find using Freegle fun" ($p < 0.000$) – unrelated to social, environmental or instrumental values was also found to correlate with engagement. As the five variables spanned two of the three broad categories of values and as tests indicated collinearity, the variables were regressed individually to examine their particular contributions to explaining the frequency of email reads. Those we regard as relating to instrumental values ('I use Freegle to get items I cannot afford' and 'using Freegle helps me save money') added

significantly to a model based only on the sample mean (i.e. 'intercept only'). The other correlated variables did not add significantly as explanatory factors, though their correlation with the frequency of email reading as observed above does indicate that they play some role. In addition, Kruskal Wallis difference tests show statistically significant differences in terms of income categories for the variables:

- 'I use Freegle to get items I cannot afford' ($p < 0.000$);
- And, 'Using Freegle helps me save money' ($p < 0.000$).

These results further confirmed that instrumental values are important for a significant number of respondents. Furthermore, the relationship between email checking and income is particularly marked for those with relatively low household incomes.

In summary these results suggest both that: values associated with user engagement include social and instrumental values (see Table 2); and that the latter, self-interested values are particularly important as a driver for engagement (at least for this group of respondents). Perhaps surprisingly, environmental values were not associated with user engagement, a finding we consider the implications of in discussion section below. Although this finding in part may reflect our choice of proxy measure for engagement (as discussed above). Accordingly, we turn now to explore how the enactment of these values is accommodated, or afforded, by Freegle's platform governance model.

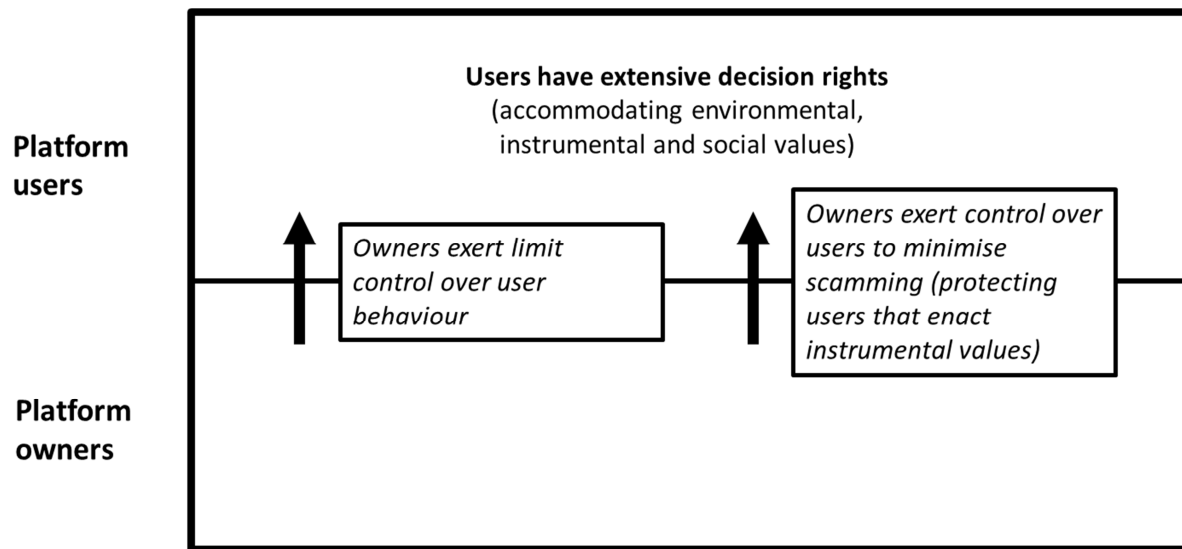


Figure 3: Mechanisms for accommodating user values in Freegle's governance

User values	Environmental	Instrumental	Social
Salience	<i>Central</i> to the governance model and <i>intentionally</i> accommodated – e.g. a core objective of the platform is keeping waste out of landfill.	<i>Central</i> to the governance model but some ambivalence about the ways in which instrumental values are enacted (e.g. profit seeking).	<i>Central</i> to the governance model and <i>intentionally</i> accommodated – e.g. the platform is dependent on users gifting items.
Intention		<i>Intentionally</i> accommodated where users are in material need. <i>Unintentionally</i> accommodated where users seek to profit.	
Enactment	<i>Potentially enacted</i> - not associated with user engagement in our survey results.	<i>Enacted</i> – identified as an important driver of user engagement in our survey results.	<i>Enacted</i> - associated with user engagement in our survey results.

Table 3: Analysing the extent to which user values are accommodated in Freegle's governance.

The primary mechanisms of accommodating the multiple and potentially conflicting values of users (see **Error! Reference source not found.**) are: offering extensive decision rights to users; and the owners of the Freegle platform exerting limited control over user behaviour (see **Error! Reference source not found.**). In terms of the former, user decision rights include which items they give or request; who to gift items to; what basis items are given on (first-come first served, convenience, perceived need or politeness of requestor etc.); and, whether or not to make a gift after initial contact has been made (there are no formal contracts or terms and conditions around the process of gifting). This set of decision rights provides considerable opportunities for users to enact social and instrumental values (Martin and Upham, 2016) (see **Error! Reference source not found.**). More

specifically, Freegle's governance model accommodates two groups of users enacting different values (see illustrative quotation below): affluent users who gift items (enacting social and possibly environmental values); and, lower income users who receive items (enacting more instrumental values). Note that here we are referring to the values implicit in this giving/receiving process, not to the values held or enacted by individuals more generally or in other contexts.

"[Freegle brings] into contact two groups of people who, in the ordinary course of events probably don't mix very much, you've got relatively affluent people who are disposing of quite high value items which they could possibly sell on eBay ..., but they're quite happy to give them to somebody that they perceive will make good use of them ... somebody who has an need for that item." [Member 5]

One of the limited controls that Freegle's owners exert over user behaviour appears to protect the interests of users who enact instrumental values and are hence the target of scams (see **Error! Reference source not found.**). As one interviewee noted "Freegle groups are absolutely besieged with scams ..., it's a serious problem" [Member 5]. Observations made by the first author suggest that scams typically consist of:

1. the scammer offering of a high-value item (e.g. a laptop or television) on the Freegle platform;
2. any users that reply to the offer are then asked by the scammer for payment to deliver the item;
3. if a payment is made, the item is not delivered and the scammer cuts off contact with the user.

To address this problem, activists seek to exert control over scammer behaviour by reviewing posts on Freegle groups to identify and remove scams, and sharing information about scams across the organisation.

Finally in this sub-section, we note that within Freegle there appears to be some ambivalence around the extent to which the enactment of instrumental values by users should be accommodated (see also **Error! Reference source not found.**). In particular, where users receive gifts via the platform and then resell them for profit. However, as illustrated in the quoted below, it appears that Freegle lacks the capability to control such behaviour due to the peer-to-peer nature of interaction between users.

"We're not opposed to stuff being collected for commercial gain necessarily, in that at least meets with the recycling thing. ... [however] there is a discussion on this ... between the ...

[members] quite often ... [starting with], 'Well if somebody's collecting something and then reselling, that's against the principle isn't it?' ... [followed by] 'Well it's not because our aim is about reusing'. And although we wouldn't really want ... a second hand shop constantly collecting stuff, there's no real mechanism to stop that." [Member 1]

5.2 Member and leader values and Freegle's governance model

We now turn to the values prominent amongst the owners of Freegle, addressing the values of members and leaders in turn. Most of the interviewees spoke about how they had become involved as a member following positive experiences of using their local free reuse group. Furthermore, many of these members framed their participation in way that resonated with multiple social and environmental values including local community, environmental protection, sociability and generosity (also see illustrative quotation below). More instrumental values were also evident, expressed in terms of helping people 'de-clutter' and Freegle providing a convenient way to dispose of unwanted items.

"So I wanted to help ... for usual reasons ... to save resources [*environmental values*], to help people out who haven't got items [*social values*] and to help people clear clutter [*instrumental values*]" [Member 3]

The mix of social and environmental values expressed by Freegle's leaders tended to mirror those of the members. However, perhaps unsurprisingly, leaders saw opportunities to enact these values at larger scales (see illustrative quotation below), while members tended to be more focused on their local community.

"Ideally, we'd want everyone in Britain to be a member and never throw away a reusable item – that's the aim. It's rather a lofty aim, and probably unrealistic... But that's what we'd hope for." [Leader 1]

Furthermore, those leaders of Freegle interviewed also expressed more instrumental values, in the form of a desire for Freegle to generate income and make better use of its user-base and volunteer membership (as illustrated in the quote below).

"Our biggest advantage ... is the fact that we have 1.68 million [users] ... that will ride us through ... a transition period. Which we are going to need to go through in the next year or two; where we get a business model, we have an income, we pay a couple of people, and we have a very nice interface that is completely in keeping with the 21st century" [Leader 3]

Turning now to explore how these values of Freegle's owners – both members and leaders - are accommodated within the platform governance model (see **Error! Reference source not found.** and **Error! Reference source not found.** for a summary). As discussed above in relation to the accommodation of user values, we observe that the multiple and diverse owner values are accommodated by: granting extensive decision rights to Freegle members; and, the leadership making limited efforts to control the members (see **Error! Reference source not found.**).

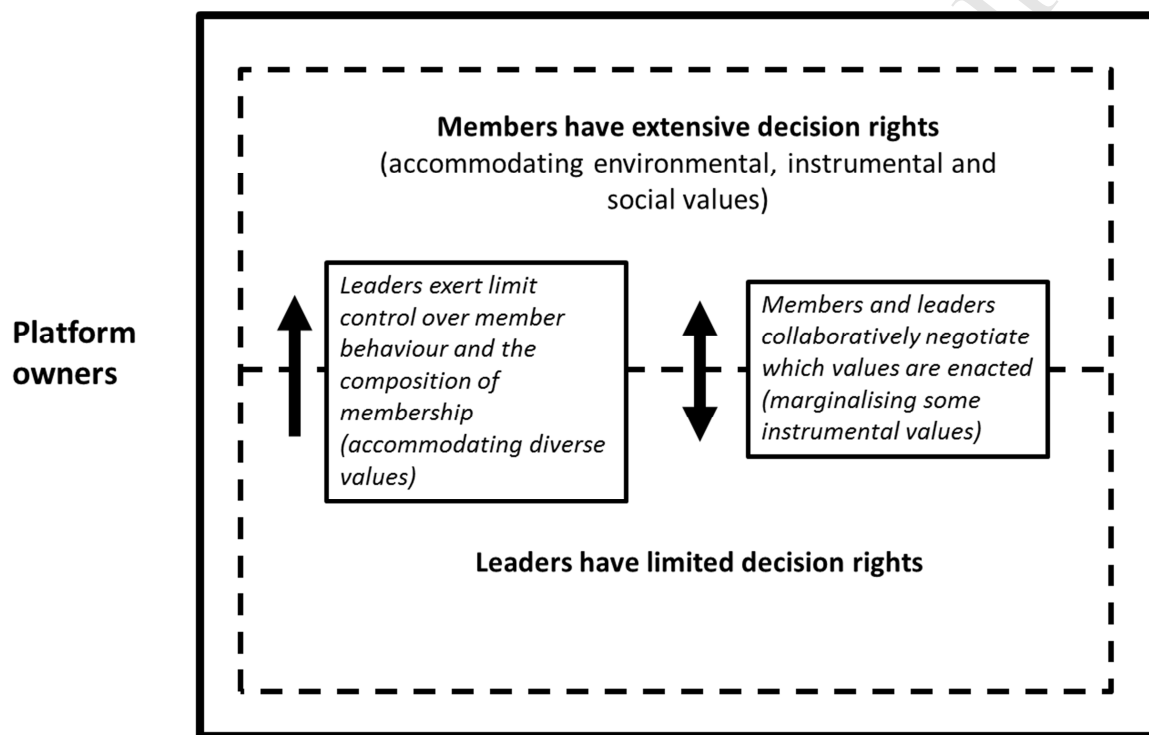


Figure 4: Mechanisms for accommodating member and leader values in Freegle's governance

Owner values	Environmental	Instrumental	Social
Salience	<i>Central</i> to the governance model and <i>intentionally</i> accommodated – e.g. a core objective of the platform is keeping waste out of landfill.	Initially <i>peripheral</i> to governance model, but growing increasingly <i>central</i> .	<i>Central</i> to governance model and intentionally accommodated – e.g. strategic decision-making based on consensus and voting.
Intention		<i>Intentionally</i> marginalised initially and then slowly <i>intentionally</i> accommodated.	
Enactment	<i>Enacted</i> – e.g. though environmental impacts of the platform, engagement with other environmental organisations.	<i>Limited</i> (although increasing) <i>enactment</i> – e.g. through moves towards income generation.	<i>Enacted</i> – e.g. through use of consensus based decision-making, despite adverse effect on Freegle's external impact.

Table 4: Analysing the extent to which owner values are accommodated in Freegle's governance.

The rights of members include making decisions about: how to promote participation in their local group; the rules of their group (as illustrated in the quotation below); and how to deal with issues arising within their group.

"Each ... group [and member] is, broadly speaking, autonomous. So there's a certain very bare minimum level of things that ... [members] have to subscribe to ... [run] a Freegle group. So, for example, people can't sell things on the group. People selling things is okay, but it's just not what we do. So there's a few basic rules like that, but, otherwise, you can have local ... differences. So, for example, some groups accept pets, which is quite a contentious area; some groups don't." [Leader 2]

Furthermore, the leadership of Freegle appears to exercise limited control over the composition of the organisation's membership. Rather, we observe that the leadership actively fosters respect for, and tolerance of, diverse values within the organisation. As described by a director of Freegle, diverse and potential conflicting values are welcomed.

"So we think reuse is a good thing ... But there might be, for example, a lot of people within Freegle who think wind farms are brilliant; there might be people who think wind farms are terrible – we would not agree on that, nor do we need to for the purposes of what we're doing. There are all sorts of issues that people involved, volunteers, would have opinions on, but, actually, they're not relevant to the central thing that we're doing." [Leader 2]

We also observe that the collaborative dynamics between the members and leaders of Freegle have played an important role in accommodating multiple values and differing perspectives on how these should be enacted (see **Error! Reference source not found.**). These collaborative dynamics are evident in the democratic decision-making processes of Freegle and were most prominent during the formation of Freegle. We note elsewhere that member participation in the democratic decision-making processes, and member control over the leadership, have declined over time (Martin et al. (2015). Both of these trends are common in democratically governed organisations in general (Spear, 2004). During the formation of Freegle, members and leaders engaged in extensive online discussions and voted in a series of polls to decide upon core organisational aims. Arguably this can be seen as a process of negotiation through which values were formally accommodated or institutionalised within the organisation's governance model. Below an excerpt from the final poll (the aims listed went on to be formally adopted) illustrates the accommodation of social and environmental values, but the marginalisation of instrumental values during Freegle's formation.

"[Please answer yes, no or don't know for each statement.]

The aims of the Freegle organisation should be:

- to promote the keeping of usable items out of landfill [*enacting environmental values*]
- to promote and support local community groups working in the area of reuse [*enacting social values*]
- to empower and support volunteers working for local Freegle groups [*enacting social values*]
- to inform the public about environmental matters related to the reuse and recycling of unwanted usable goods [*enacting environmental values*]
- to promote sustainable waste management practices [*enacting environmental values*]" (Freegle, 2009)

Thus although instrumental values have slowly been accommodated within Freegle's governance model since its formation, they remain peripheral and secondary to social and environment values in terms of formal institutionalisation. This has been a lengthy and challenging process in which the leadership and members have (re)negotiated the extent to which instrumental values should be accommodated and how they might be enacted. In practical terms, this process involved extensive

online discussions between members and leaders, report writing and polling of the membership. For example, it took 20 months to make and implement the decision that Freegle should adopt a legal form that enables income to be generated. Furthermore, it is also arguable that the democratic decision making processes and the limited decision rights of the leadership have had considerable impacts upon Freegle's organisational efficiency and effectiveness. In particular, Freegle's focus on developing and enacting democratic decision-making processes have consumed the limited time resource available to pursue to core organisational goals, such as increasing its impact across the UK (Martin et al., 2015).

6. Discussion

Activists and academics have argued that democratically governed alternatives to the established sharing economy mega-platforms, such as Airbnb and Uber, could and should be developed to promote social and environmental values. The idea of a democratically governed alternative to Uber (referred to here as demoUber) is a particular favourite of activists (e.g. Konczal 2014; Gorenflo 2015). Accordingly, we use demoUber in this section to illustrate the implications of the Freegle case study for the wider adoption of democratic governance models within the sharing economy. Before doing so, we outline why insights from our study of Freegle can be considered relevant to policy-makers, activists and social entrepreneurs engaging with the sharing economy. Freegle shares a common characteristic with platforms across the sharing economy, each employs a general purpose technology (the digital platform) to enable peer-to-peer economic activities. In the case of Freegle to enable generalise reciprocal exchange of consumer goods (Willer et al., 2012), whilst in the case of Uber/demoUber to enable the provision and consumption of transportation services. Freegle, while not a household name in the UK or internationally well-known, embodies one of the few, live models for establishing and sustaining a democratic model of platform governance. Freegle is thus not representative of the sharing economy as currently constituted, but rather provides insights into how sharing economy platforms might in the future be governed in ways that better align with the concerns of social and environmental sustainability.

Freecycle participants broke away from an established platform, as a result of their social values being marginalised, to create a democratically governed alternative (Freegle) (Martin et al., 2015). Hence, the first stage in establishing demoUber might be a breakaway of drivers from Uber, perhaps motivated by the on-going marginalisation of their labour rights and limited opportunities to enact

social values such as solidarity. This is certainly easier to envision than the management of Uber deciding to move to a democratic platform governance model. However, this would bring demoUber into direct competition with Uber, so setting up a challenging situation. Arguably both Uber and demoUber users would be primarily interested in enacting instrumental values; in other words they use and would use such platforms to the extent that they offer a more efficient and lower cost service than traditional taxis. Hence demoUber would be at a considerable competitive disadvantage if it offered a less efficient or higher cost service. The relative efficiency of democratically-governed organisations compared to corporate organisations operating with a hierarchical decision-making model is the topic of considerable debate in the academic literature (e.g. Soboh et al. 2012; Sterner 1990; Sexton & Iskow 1993) and it is difficult to make generalisations about which form is more or less 'efficient', even assuming that consensus on the terms of such efficiency could be found. However, it is relatively clear that if the enactment of instrumental values is considered secondary to the enactment of social values (as in the Freegle case), demoUber could face major challenges. In particular, challenges in mobilising the investment required developing a platform with comparable features to Uber; and in engaging sufficient numbers of drivers to ensure the platform offered an adequate service.

Given these challenges, we turn to consider how democratic governance models might achieve more widespread adoption across the sharing economy. There is the potential for policy-makers to offer greater support to democratically governed platforms, both through funding to support the development of platforms with innovative governance models and through other incentives. In terms of the latter, the UK Government recently announced sharing economy tax allowances that provide the users of some platforms, including Airbnb, with the opportunity to earn tax-free income (HM Government, 2016). Such regulations could be amended to provide an incentive to use emerging democratically governed platforms; for example, tax allowances could also be offered to their users and owners. Furthermore, while we are cautiously optimistic about the potential of democratic governance models, we also emphasise that such models are far from the only approach to ensure social and environmental values are enacted within the sharing economy (Balaram, 2016). In particular, there is a need for new forms of regulation (Finck and Ranchordás, 2016) targeted at ensuring sharing economy platforms promote social and environmental values.

The Freegle case study also has implications for platform owners seeking to design, implement and sustain democratic models of platform governance. First, the case highlights the need for such governance models to mobilise participants with different values and varying levels of engagement and interest in the platform and its objectives. In particular, it might be helpful to draw a distinction

between: users with a passing or limited interest in the platform – who do not have rights to participate in democratic decision-making process; and the more engaged owner-members of the platform - who have rights to participate in democratic decision-making process. To grow participation in governance platform, users might be invited to become owner-members on the basis of a consistent record of platform use and the peer-to-peer feedback they have received.

Secondly, a desire to provide a service to, engage with and enhance local communities has played an important role in the development of Freegle's governance model. We suggest that this feature might prompt the owners of other sharing economy platforms to reflect on the assumption that their platforms should offer an identical service to geographically distinct communities. Rather, platform owners might engage with representatives of the communities they impact upon, in an effort to tailor their services to needs and values of specific local communities (Seyfang and Smith, 2007).

Thirdly, environmental values were not associated with engagement with the platform for the group of Freegle users surveyed, whilst social and instrumental values were. This suggests that the acts of gifting and reuse which are prominent in Freegle, and perhaps in sharing generally, can be understood as a practices underpinned by pro-social and utilitarian values. Hence, platform owners might experiment with developing their marketing and online presence to appeal to such values as a means of encouraging sharing platform use, in the knowledge that if a platform is appropriately designed it may yield environmental benefits, without needing to directly appeal to the environmental values and concerns of potential users. In doing so, platform owners would be drawing on the ideas of early advocates of the sharing economy (Botsman and Rogers, 2010). Ideas which have been marginalised in the mainstream, neoliberal sharing economy discourse that emphasises the desirability of ongoing disruptive innovation and the benefits of what may be considered as new forms of precarious work in the digital economy (Cockayne, 2016; Gruszka, 2017).

Finally, we can consider how future sharing economy research might address the topics of platform governance and values. As sharing economy platforms continue to disrupt industries and influence mobility and housing in cities across the globe, there is considerable need for further research that maps the forms of governance models that are emerging and analyses which of these are more successful in delivering social, environmental and economic benefits simultaneously. The conceptualisation of platform governance presented here may prove helpful in such research, but further work is also required to enrich the range of conceptual tools available to researchers focusing on sharing economy platform governance. In such research, theories of organisational governance within the social enterprise literature (for example Mason et al. 2007) might prove

particular useful, given that this literature focuses on organisations that seek to create social and/or environmental value alongside economic value.

A further question to be addressed is to what extent are environmental, instrumental and social values in conflict in the governance of sharing economy platforms. It is possible that the Freegle platform may have engendered (and may still engender) greater environmental benefits (in terms of reuse facilitated) if greater emphasis was and is placed in appealing to instrumental as well as social and environmental values. More broadly, claims that the sharing economy as whole will drive a shift towards social and environment values should be subjected to critique and empirically tested. It seems likely, that given the diversity of platforms referred to as part of sharing economy (from Freegle to Uber), that there will also be diversity in the extent to which platforms propagate social, environmental and instrumental values. This returns us to the question of which platforms, and which sectors of the sharing economy, have the greatest potential to contribute to creating more environmentally and socially sustainable societies.

7. Conclusions

At a time when there is growing concern that the sharing economy is being exploited as a purely commercial opportunity, activists and academics have claimed that democratic platform governance models could help the sharing economy become more environmentally and socially sustainable. Here we have focused on the connections between such models and the social, environmental and instrumental values of sustainability. In doing so, we have developed a framework for analysing sharing economy platform governance, bringing together theories of platform governance, democratic organisational governance and the enactment of values in socio-technical systems.

The proposed framework distinguishes between different forms of platform ownership (membership and leadership) and challenges the implicit assumption in much of the sharing economy literature that platform owners are and should be leaders/managers and investors. Applying this framework, we have analysed with mixed methods the case study of Freegle, perhaps the most well-established and long lived exemplar of democratic platform governance in the sharing economy. Through this case study we have presented empirical insights of relevance to sharing economy researchers and policy-makers, activists and social entrepreneurs seeking to create a more sustainable sharing economy.

The case of Freegle evidences that a democratic governance model can to some extent accommodate the social, environmental and instrumental values of platform users and owners.

More specifically, Freegle's democratic governance model is sufficiently flexible to accommodate the social, environmental and instrumental values of users. However, the results of a survey of Freegle users has suggested that it is only social and instrumental values that are significantly associated with users' level of engagement with the platform. The social and environmental values of the *owners* of Freegle (held and advanced by both members and leaders), were rather better accommodated than their instrumental values (most prominently held and advanced by leaders). In this regard, within Freegle's democratic governance model the membership seems to have acted as a counterbalance to leadership power, ensuring that the leadership's desire to better accommodate instrumental values has been tempered. This dynamic is, however, also associated with Freegle's slow and limited integration of the instrumental values associated with income generation.

Nonetheless, the enactment of social values through the Freegle platform is prominent amongst owners (both leaders and members) and users. These shared social values provide a vital common ground among owners and users that have differing concerns and interests. This in turn raises the question of whether fertile ground for growing a more sustainable and democratic sharing economy might be found in the social (rather than environmental) values and concerns of citizens, activists, entrepreneurs and policy-makers.

Acknowledgements

This research was supported by an ESRC Management and Business Development Fellowship grant (ES/L00271X/1). We would like to thank all those involved in Freegle who took part in the research, in particular Edward Hibbert and the other directors who provided very helpful feedback on our findings throughout the research process.

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